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UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
SNOW SURVEY UNIT
P.O. BOX 17107
DENVER, COLORADO 80217



WATER SUPPLY OUTLOOK FOR COLORADO AND NEW MEXICO

U.S. DEPT. OF AGRICULTURE
FIRST CLASS MAIL

FEB 20 '80

and
FEDERAL-STATE-PRIVATE COOPERATIVE SNOW SURVEYS

AS OF
FEBRUARY 1, 1980



U.S. DEPARTMENT of AGRICULTURE * SOIL CONSERVATION SERVICE

Collaborating with
COLORADO STATE UNIVERSITY EXPERIMENT STATION
STATE ENGINEER of COLORADO
and STATE ENGINEER of NEW MEXICO

Issued by
NORMAN A. BERG
ADMINISTRATOR
SOIL CONSERVATION SERVICE
WASHINGTON, D.C.

Released by
ROBERT G. HALSTEAD
STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
DENVER, COLORADO

A.W. HAMELSTROM
STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
ALBUQUERQUE, NEW MEXICO

Report prepared by
BERNARD A. SHAFER, Snow Survey Supervisor
JAMES K. MARRON, Assistant Snow Survey Supervisor
JUDY RAYE TEILBORG, Statistical Assistant

SOIL CONSERVATION SERVICE
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P.O. BOX 17107
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PUBLIC MEETING RESULTS ON SNOW SURVEY PROGRAM

AS MOST OF THE RECIPIENTS OF THIS REPORT ARE AWARE, A SERIES OF PUBLIC PARTICIPATION MEETINGS ON THE FUTURE OF THE SNOW SURVEY PROGRAM IN COLORADO AND NEW MEXICO HAS RECENTLY BEEN CONCLUDED. THESE MEETINGS, AS WELL AS SOLICITATIONS FOR WRITTEN COMMENTS FROM THE PUBLIC, WERE DIRECTED AT ANSWERING THE QUESTION "WHAT ALTERNATIVE INSTITUTIONAL ARRANGEMENTS COULD BE MADE FOR MAKING SNOW SURVEYS AND WATER SUPPLY FORECASTS?" SIMILAR MEETINGS WERE HELD SIMULTANEOUSLY IN OTHER WESTERN STATES TO GAIN THE PUBLIC'S VIEW AS TO THE MOST BENEFICIAL AND ECONOMICAL MANNER TO CONDUCT THE SNOW SURVEY PROGRAM.

FROM THE INPUT RECEIVED AT FOUR PUBLIC MEETINGS IN COLORADO AND ONE IN NEW MEXICO, AS WELL AS OVER A HUNDRED LETTERS AND RESOLUTIONS, A VERY STRONG SHOW OF SUPPORT FOR THE PROGRAM HAS BEEN VOICED. A CLEAR MAJORITY OF THOSE COMMENTING WERE IN FAVOR OF EXPANDING THE SNOW SURVEY PROGRAM INCLUDING BOTH THE MANUAL SYSTEM AND SNOTEL SYSTEM UNDER THE CONTINUED LEADERSHIP OF THE SOIL CONSERVATION SERVICE (SCS). THE REMAINDER OF THE COMMENTS FAVORED CONTINUING THE PROGRAM IN ITS PRESENT FORM WITH SCS AS THE LEAD AGENCY. IN NO INSTANCE WAS THERE A DESIRE EXPRESSED FOR A DISCONTINUANCE OF THE PROGRAM OR A TRANSFER OF PROGRAM FUNCTIONS TO NON-FEDERAL ENTITIES. MANY OF THOSE PARTICIPATING IN THE PUBLIC MEETINGS FELT, HOWEVER, THAT COOPERATORS SHOULD ASSUME A PROPORTIONATE SHARE OF THE COSTS FOR FUTURE PROGRAM EXPANSION.


THE ABOVE SUMMARY ALONG WITH THOSE FROM OTHER WESTERN STATES WILL BE COMBINED AND A NEW PROPOSAL FOR CONDUCTING THE PROGRAM WILL BE PUBLISHED IN THE FEDERAL REGISTER DURING MAY, 1980. AT THAT TIME ADDITIONAL COMMENTS WILL BE INVITED FROM THE PUBLIC.

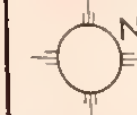
"The Conservation of Water begins with the Snow Survey"

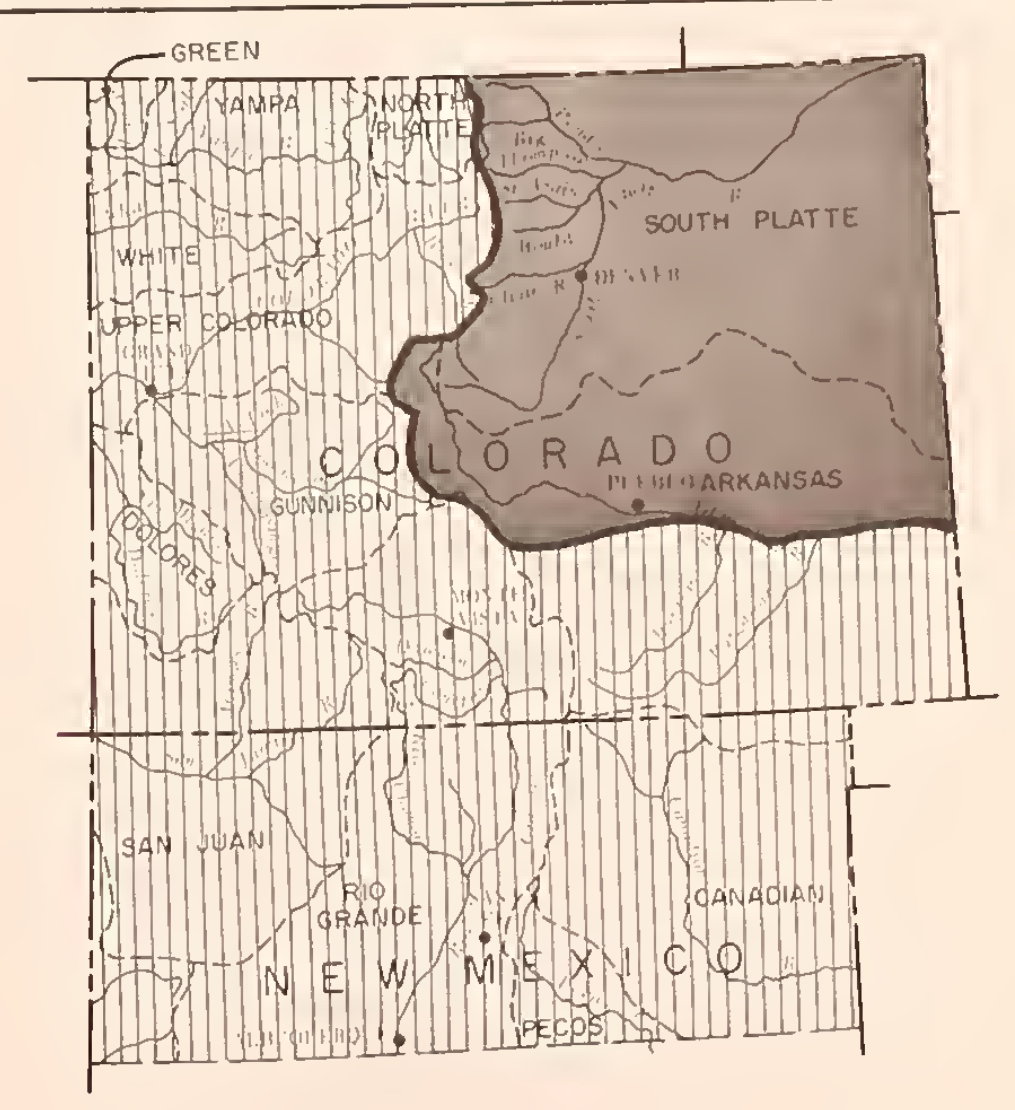
WATER SUPPLY CONDITIONS

as of
FEBRUARY 1, 1980

ABOVE NORMAL AMOUNTS OF PRECIPITATION IN MOST AREAS HAS SUBSTANTIALLY BOOSTED THE MOUNTAIN SNOWPACK IN BOTH COLORADO AND NEW MEXICO. THROUGHOUT BOTH STATES SNOWPACK IS ABOVE AVERAGE. LOCALIZED AREAS HAVE RECEIVED EXTREMELY HEAVY SNOWFALLS IN A SHORT PERIOD OF TIME. A GOOD EXAMPLE IS THE STORM WHICH PRODUCED 6.4" OF SNOW WATER EQUIVALENT AT THE UPPER SAN JUAN SNOTEL SITE ON WOLF CREEK PASS IN THE PERIOD JANUARY 26-31. STREAMFLOW FORECASTS ARE ALL ABOVE NORMAL. ALL FORECASTS ARE A JOINT EFFORT OF THE SOIL CONSERVATION SERVICE AND THE NATIONAL WEATHER SERVICE.

 **COLORADO** -- STREAMFLOW FORECASTS FOR THE STATE VARY FROM 10-40% ABOVE NORMAL WITH THE EXCEPTION OF A FEW TRIBUTARY STREAMS WHICH ARE NEAR AVERAGE. THESE FORECASTS REFLECT MOUNTAIN SNOWPACK CONDITIONS WHICH RANGE FROM A LOW OF 118% OF AVERAGE IN THE GUNNISON BASIN TO 148% OF AVERAGE IN THE SOUTH PLATTE BASIN. STORAGE IN IRRIGATION RESERVOIRS IS 112% OF NORMAL WHICH IS NEARLY 30% BETTER THAN THE SAME TIME A YEAR AGO. IF NEAR AVERAGE CONDITIONS OCCUR THE REMAINDER OF THE SEASON, A PLENTIFUL SUPPLY OF WATER IS ANTICIPATED.

 **NEW MEXICO** -- ANOTHER YEAR OF GOOD TO EXCELLENT WATER SUPPLY IS FORECAST IN THE RIO GRANDE BASIN IF THE PRESENT PATTERN OF PRECIPITATION PERSISTS FOR SEVERAL MORE MONTHS. SNOWPACK IN THE RIO GRANDE BASIN IN NEW MEXICO IS 125% OF NORMAL WHICH REFLECTS HEAVY JANUARY PRECIPITATION IN HEADWATER AREAS EXCLUDING THE SANGRE DE CRISTO MOUNTAINS. SPRING SNOWMELT RUNOFF IS PROJECTED TO BE 10-35% ABOVE NORMAL. THESE PROJECTIONS, WHEN COUPLED WITH CARRYOVER RESERVOIR STORAGE WHICH IS NEARLY TWICE AVERAGE, REPRESENT A BRIGHT PROSPECT FOR THE COMING YEAR.



STREAMFLOW FORECASTS
Percent of 1963-77 Average

- Over 130%
- 110-130%
- 90-110%
- 70-90%
- Under 70%

The map on this page indicates the most probable water supply as of the date of this report. Estimates assume average conditions of snow fall, precipitation and other factors from this date to the end of the forecast period. As the season progresses accuracy of estimates improves. In addition to expected streamflow, reservoir storage, soil moisture in irrigated areas, and other factors are considered in estimating water supply. Estimates apply to irrigated areas along the main streams and may not indicate conditions on small tributaries.

SOUTH PLATTE RIVER WATERSHED IN COLORADO



YOUR WATER SUPPLY

HEAVY PRECIPITATION DURING THE MONTH OF JANUARY HAS SUBSTANTIALLY IMPROVED THE MOUNTAIN SNOWPACK AND THUS THE PROSPECTS FOR A GOOD RINOFF SEASON THIS SPRING. STREAMS ALONG THE FRONT RANGE AND THE HEADWATERS OF THE SOUTH PLATTE ARE ALL EXPECTED TO PRODUCE FLOWS FROM 25 TO 35 PERCENT ABOVE NORMAL IF PRECIPITATION FOR THE REMAINDER OF THE SEASON IS NEAR AVERAGE. WITH SOIL MOISTURE IN CROPPING AREAS RATED AS GOOD AND RESERVOIR SUPPLIES ABOUT 15 PERCENT ABOVE NORMAL AN EXCELLENT OUTLOOK IS SEEN.

STREAMFLOW FORECASTS (1000 Ac. Ft.) April - September

FORECAST POINT	Forecast	% of Average	1963-77 Average
Bear Creek at Mountain	55	118	28.0
Big Thompson River at Drake (1)	130	127	102.0
Boulder Creek at Dredell	60	153	45.1
Cache La Poudre River at Canyon North (2)	310	128	243.0
Clear Creek at Golden (3)	160	153	120.0
St. Vrain Creek at Lyons	95	135	71.6
South Platte River at South Platte	251	150	193.0

(1) Through the plain to the north of the divide. (2) Through the river to the south of the divide. (3) Through the river to the south of the divide.

WATER SUPPLY OUTLOOK

STREAM or AREA	Flow Period	Flow Period	Flow Period
Coal Creek	Exc.	Avg.	
North Fork of South Platte	Exc.	Avg.	
North Fork of Cache La Poudre	Exc.	Avg.	
Reiten Creek	Exc.	Avg.	
Rock Creek	Exc.	Avg.	
South Platte from Greeley to Fort Morgan	Exc.	Avg.	
South Platte from Fort Morgan to Sterling	Exc.	Avg.	
South Platte below Sterling	Exc.	Avg.	

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

Reservoir	Jan.	Feb.	Mar.	Apr.	May
Antero	16	16	16	14	
Barr Lake	32	26	13	22	
Black Hollow	8	4	3	4	
Boyd Lake	44	40	37	37	
Cache La Poudre	10	9	7	7	
Carter Lake	109	89	90	81	
Chambers Lake	9	6	4	3	
Chesman	79	69	37	48	
Cobb Lake	34	20	4	14	
Eleven Mile	98	98	91	87	
Empire	38	15	15	23	
Fossil Creek	12	5	5	7	
Groen	43	22	19	28	
Halligan	6	5	3	3	
Horseshoe	164	108	75	83	
Jackson	35	31	21	29	
Julesburg	28	18	17	20	
Lake Loveland	14	10	8	9	
Lone Tree	9	8	1	6	
Marianne	5	5	4	5	
Marshall	10	6	3	4	
Mayton	17	16	15	15	
Nilton	24	16	8	13	
Point of Rocks	70	68	54	55	
Prowitt	33	19	22	18	
Riverside	58	34	31	44	
Stanley	42	40	27	21	
Terry	8	4	5	5	
Union	13	13	11	10	
Windsor	19	12	9	10	



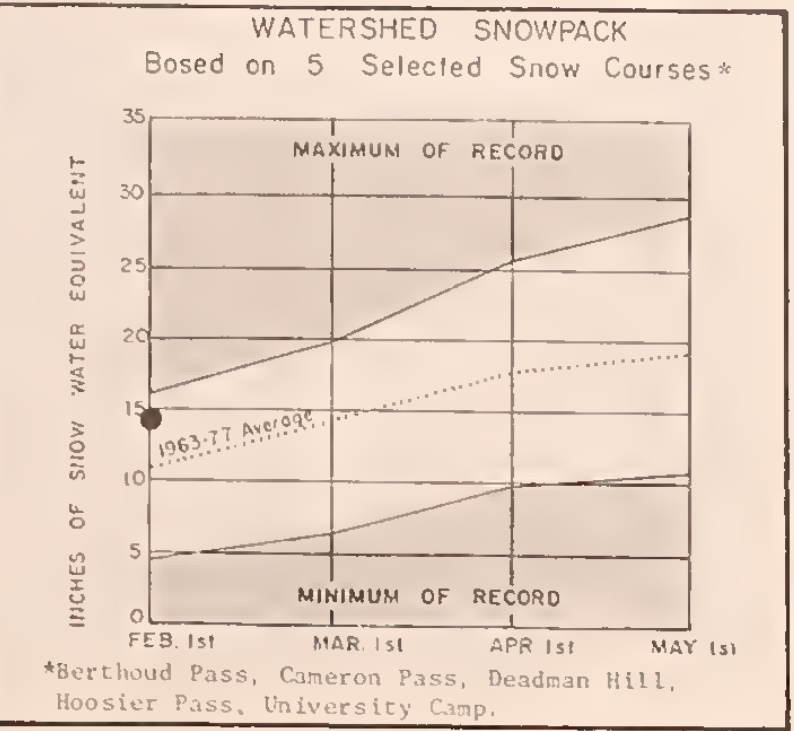
SUMMARY of SNOW MEASUREMENTS

SNOW COURSE	DATE OF SURVEY	SNOW DEPTH (INCHES)	WATER CONTENT (INCHES)	WATER CONTENT (PERCENT OF AVERAGE)
Big Thompson	5	89	139	
Boulder	5	123	163	
Cache La Poudre	8	105	129	
Clear Creek	5	140	154	
Saint Vrain	2	125	247	
South Platte	7	106	148	

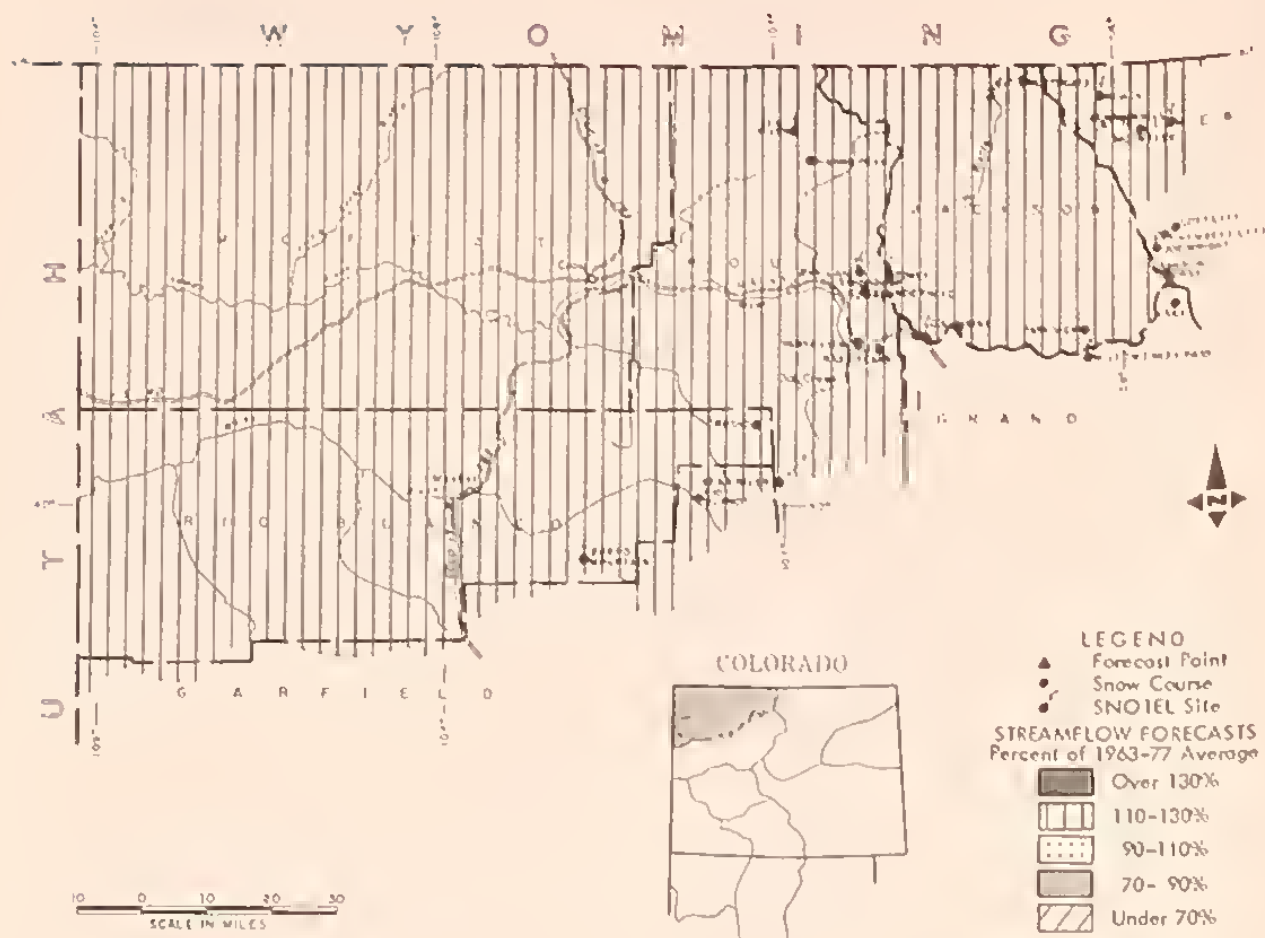
SNOW COURSE MEASUREMENTS

SNOW COURSE	DATE OF SURVEY	SNOW DEPTH (INCHES)	WATER CONTENT (INCHES)	WATER CONTENT (PERCENT OF AVERAGE)
SOUTH PLATTE BASIN				
Boulder Creek				
Baltimore	1/30	35	8.2	3.8
Boulder Falls	1/28	44	11.5	10.6
Lake Eldora	1/28	46	12.0	8.2
University Camp	1/28	55	15.2	13.8
Big Thompson River				
Bear Lake	1/28	66	15.8	15.0
Deer Ridge	1/27	26	5.2	2.9
Hidden Valley	1/27	41	7.6	8.7
Lake Irene (B)	1/26	54	15.5	17.1
Long's Peak	1/31	44	11.6	11.5
Two Mile	1/27	43	10.5	13.8
Willow Park	NS	--	--	--
Cache La Poudre				
Bennett Creek	1/30	59	8.5	6.5
Big South	1/31	21	4.0	2.8
Cameron Pass	2/01	66	19.5	18.2
Chambers Lake	1/31	36	9.2	9.3
Deadman Hill	2/02	50	12.0	12.2
Hourglass Lake	Not Scheduled	--	--	--
Joe Wright	2/01	61	16.8	16.6
Lost Lake	2/02	44	9.7	10.8
Red Feather	1/30	36	8.2	5.1
Clear Creek				
Baltimore (B)	1/30	35	8.2	3.8
Berthoud Falls	1/30	56	14.2	10.0
Empire	1/30	34	7.8	5.4
Grizzly Peak (B)	1/30	56	13.1	11.2
Loveland Pass	1/30	52	13.2	10.1
St. Vrain River				
Gopeland Lake	2/01	34	8.0	6.2
Ward	1/28	27	6.8	5.6
Wild Basin			11.2	6.8
South Platte River				
Bison Reservoir	2/01	23	5.5	2.4
Como	1/28	23	5.5	6.7
Geneva Park	1/30	22	4.1	3.4
Horseshoe Mountain	1/30	40	10.0	9.2
Hoosier Pass	1/29	37	11.1	9.5
Jefferson Creek	1/28	31	7.8	7.6
Mosquito	1/29	38	10.1	9.0
Niwot			--	--
Trout Creek Pass	1/31	24	5.8	6.0

NS - no survey. (B) - adjacent drainage.



YAMPA, WHITE AND NORTH PLATTE RIVER WATERSHEDS IN COLORADO



YOUR WATER SUPPLY

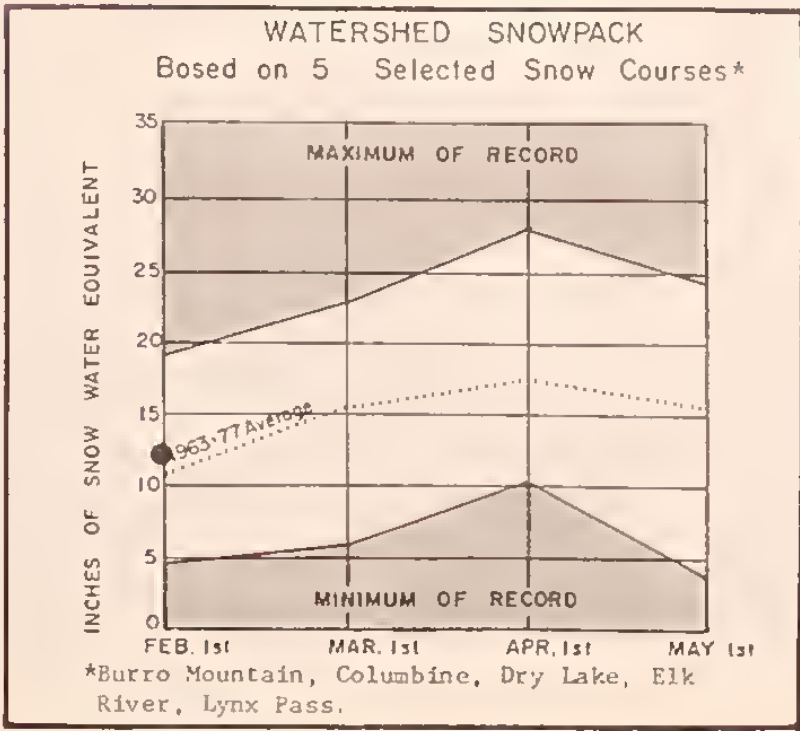
SNOW COURSE MEASUREMENTS TAKEN IN THE LAST WEEK OF JANUARY INDICATE SNOWPACKS IN THE YAMPA, WHITE AND NORTH PLATTE DRAINAGES ARE GENERALLY ABOVE AVERAGE. SNOWSTORMS HAVE HAD MORE EFFECT ON THE AREA NEAR THE CONTINENTAL DIVIDE THAN TO THE WEST. THE LARAMIE AND NORTH PLATTE DRAINAGES ARE 130-140% OF NORMAL, WHILE THE WHITE IS ONLY SLIGHTLY ABOVE AVERAGE AT 103% OF NORMAL. SOIL MOISTURE CONDITIONS ARE GENERALLY FAIR.

STREAMFLOW FORECASTS (1000 Ac. Ft.) April - September

FORECAST POINT	Forecast	% of Average	1963-77 Average
Elk River at Clark	230	116	198.0
Laramie River near Woods	144	115	125.0
Little Snake River at Lily	400	115	349.0
North Platte River at Northgate	286	120	238.0
White River near Meeker	300	105	287.0
Yampa River near Naybell	1025	113	905.0
Yampa River at Steamboat Springs	300	110	273.0

WATER SUPPLY OUTLOOK

STREAM or AREA	Flow Period	Flow Period	Flow Period
Canadian River	Avg.	Fair	
Hunt Creek	Avg.	Fair	
Illinois River	Avg.	Fair	
Michigan River	Avg.	Fair	
Oak Creek	Avg.	Fair	
Trout Creek	Avg.	Fair	



SUMMARY of SNOW MEASUREMENTS

SNOW COURSE	DATE OF SURVEY	SNOW DEPTH (INCHES)	WATER CONTENT (INCHES)	WATER CONTENT (PERCENT OF AVERAGE)
Elk	2	87	112	
Laramie	2	100	131	
North Platte	5	118	141	
White	2	86	103	
Yampa	6	98	126	

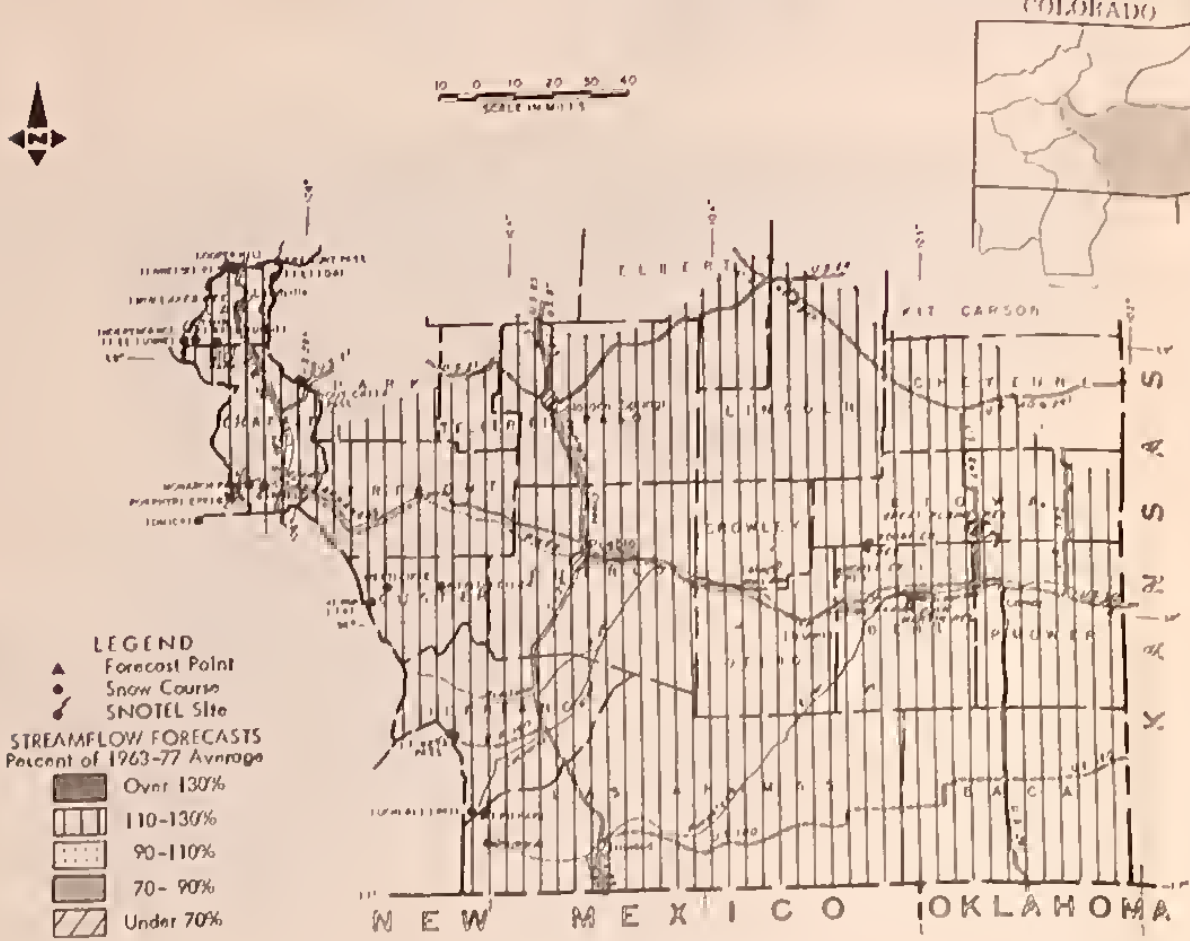
SNOW COURSE MEASUREMENTS

SNOW COURSE	DATE OF SURVEY	SNOW DEPTH (INCHES)	WATER CONTENT (INCHES)	WATER CONTENT (PERCENT OF AVERAGE)
NORTH PLATTE BASIN				
Laramie River				
Deadman Hill	2/02	50	12.0	12.2
McIntyre	Not Scheduled	--	--	--
Rough	1/30	66	16.0	15.8
North Platte River				
Cameron Pass	2/01	66	19.5	18.2
Columbine Lodge	1/29	61	16.7	16.5
Northgate	1/31	31	5.7	4.0
Park View	1/31	36	6.5	7.5
Willow Cr. Pass (B)	1/11	88	24.0	10.8
YAMPA BASIN				
Elk River				
Elk River	1/28	38	12.5	14.6
Hahn's Peak	1/28	53	11.6	13.0
White River				
Burro Mountain	1/31	46	10.1	12.5
Rio Alamos	1/30	45	10.8	11.9
Yampa River				
Bear River	NS	--	--	--
Columbine (B)	1/29	61	14.7	19.6
Crown	NS	--	--	--
Dry Lake	1/30	61	14.7	17.6
Lynx Pass (B)	1/29	41	8.5	8.9
Rabbit Run	1/29	66	16.3	18.3
Tower	1/30	115	32.0	39.1
Yampa View	1/29	50	12.0	12.2

NS - no survey. (B) - adjacent drainage.



ARKANSAS RIVER WATERSHED IN COLORADO



YOUR WATER SUPPLY

THE HEADWATERS OF THE ARKANSAS BENEFITED THE MOST FROM TWO HEAVY STORM PERIODS DURING THE FIRST AND LAST WEEKS OF JANUARY. SNOWPACK ABOVE SALIDA IS NOW 127% OF AVERAGE WHICH REPRESENTS ABOUT 60% OF THE SEASON'S NORMAL MAXIMUM ACCUMULATION. STREAMFLOW ON THE ARKANSAS RIVER IS FORECAST 25-40% ABOVE NORMAL. TRIBUTARIES TO THE ARKANSAS INCLUDING THE PURGATOIRE, HUMPHANO AND CUCHARAS ARE FORECAST TO FLOW LESS THAN THE ARKANSAS MAINSTEM DUE TO A SOMEWHAT LOWER SNOWPACK. RESERVOIR STORAGE REMAINS LESS THAN HALF OF NORMAL.

STREAMFLOW FORECASTS (1000 Ac. Ft.) April - September

FORECAST POINT	Forecast	% of Average	1963-77 Average
Arkansas River near Pueblo (1)	364	139	260.0
Arkansas River at Salida (2)	365	126	288.0
Cucharas River near La Veta	11	121	9.1
Huerfano River near Redwing	14	104	13.4
Purgatoire River at Trinidad (3)	38	116	32.8

(1) Flow change in storage in Pueblo Reservoir. (2) Diverted flow plus change in flow in Clear Creek, Twin Lakes and Reservoir. (3) Change in storage in Trinidad Reservoir.

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

Basin of Stream and Reservoir	Storage	1963-77 Average
Adobe	62	0
Clear Creek	11	6
Cucharas	40	0
Great Plains	150	0
Huerfano	27	7
John Martin	621	22
Meredith	42	0
Model	15	0
Pueblo	351	43
Turquoise	121	71
Twin Lakes	58	33

WATER SUPPLY OUTLOOK

STREAM AREA	Source	Supply
Apishapa River	Avg.	Fair
Fountain Creek	Exc.	Avg.
Crope Creek	Avg.	Fair
Hardacker Creek	Avg.	Fair
Monument Creek	Exc.	Avg.



SUMMARY of SNOW MEASUREMENTS

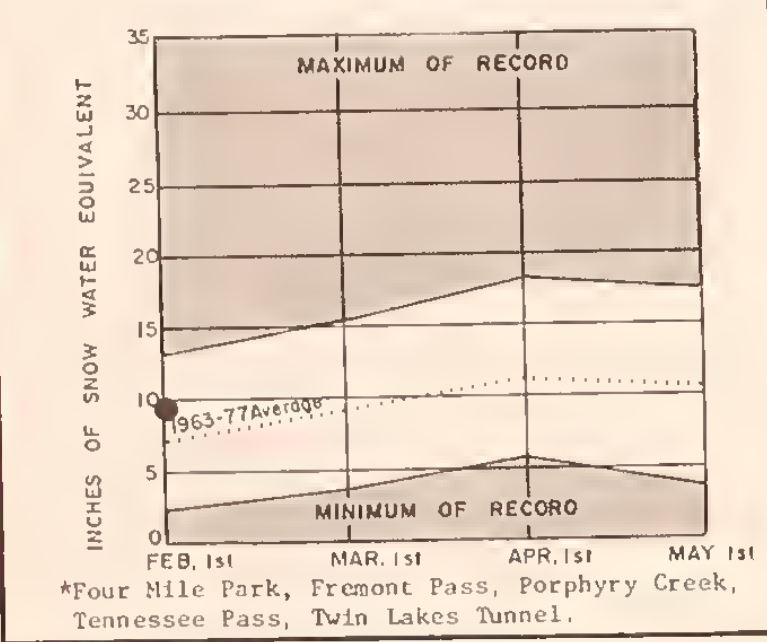
RIVER BASIN	Number of Courses	1963-77 Average	1963-77 Average
Arkansas	11	81	127
Cucharas	2	80	120
Purgatoire	1	111	120

SNOW COURSE MEASUREMENTS

SNOW COURSE	DATE SURVEY	SNOW DEPTH (INCHES)	WATER CONTENT (INCHES)	1963-77 Average
ARKANSAS BASIN				
Arkansas River				
Bigelow Divide	1/30	26	6.2	5.7
Brumley	1/29	38	8.9	---
Cooper Hill (B)	1/25	33	7.9	9.3
East Fork	1/29	33	8.2	7.6
Four Mile Park	1/29	23	4.5	7.1
Fremont Pass	1/29	49	13.3	10.8
Garfield	1/31	48	11.8	13.7
Hermit Lake	1/29	28	6.0	13.4
Monarch Pass	1/31	54	13.1	16.6
South Colony	1/29	50	12.8	27.4
Tennessee Pass	1/29	36	7.6	9.0
Twin Lakes Tunnel	2/01	41	9.8	11.7
Westcliffe	1/29	21	5.4	10.9
Cucharas River				
Apishapa	1/30	24	6.7	6.0
Cucharas Creek	1/30	28	6.6	---
La Veta Pass (B)	1/28	26	6.4	10.3
Purgatoire River				
Bourbon	1/29	28	5.9	5.3
Whiskey Creek	1/29	31	6.5	7.8

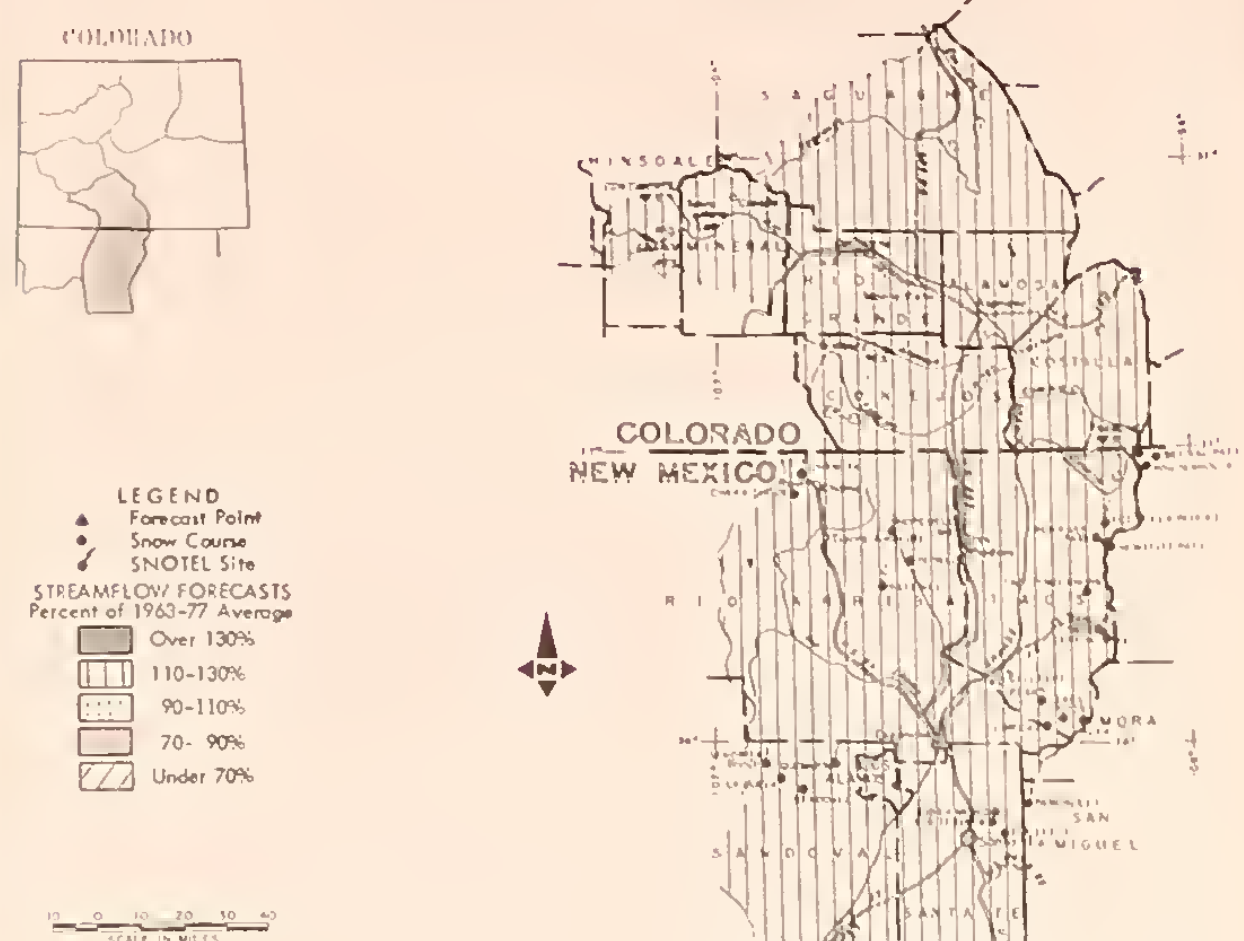
(S)-No survey. (B)-On adjacent drainage.

WATERSHED SNOWPACK Based on 5 Selected Snow Courses *



*Four Mile Park, Fremont Pass, Porphry Creek, Tennessee Pass, Twin Lakes Tunnel.

RIO GRANDE WATERSHED IN COLORADO AND NEW MEXICO



RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

Basin of Stream and Reservoir	Storage	1963-77 Average
COLORADO		
Continental	27	6
Platoro	75	31
Rio Grande	51	40
Sanchez	103	---
Santa Maria	45	12
Terrace	18	---
NEW MEXICO		
Avalon	5	4
Caballo	344	110
Conchas	273	75
El Vado	195	124
Elephant Butte	2195	938
McMillan	34	15
Sumner	11	86

WATER SUPPLY OUTLOOK

STREAM AREA	Source	Supply
COLORADO		
Sangre de Cristo Cr	Avg.	Avg.
Trinchera Creek	Avg.	Avg.
NEW MEXICO		
Embudo Creek	Avg.	Fair
Mora River	Avg.	Fair
Nambe Creek	Avg.	Fair
Rio Ojo Caliente	Avg.	Fair
Santa Fe Creek	Avg.	Fair

YOUR WATER SUPPLY

JANUARY BROUGHT HEAVY PRECIPITATION TO MOST AREAS OF THE RIO GRANDE WATERSHED IN COLORADO AND NEW MEXICO. A GOOD EXAMPLE OF THE INTENSITY OF THE STORMS DURING THE LATTER PART OF JANUARY IS THE 6.4" OF SNOW WATER EQUIVALENT RECORDED AT THE UPPER SAN JUAN SNOTEL SITE ON WOLF CREEK PASS BETWEEN JANUARY 26-31. SNOWPACK IS NOW 130% OF NORMAL IN THE RIO GRANDE BASIN IN COLORADO AND 122% OF NORMAL IN THE RIO GRANDE IN NEW MEXICO. AREAL SNOWCOVER IS 86%. WATER SUPPLIES ARE ANTICIPATED TO BE NEAR 20% ABOVE AVERAGE ON THE MAINSTEM OF THE RIO GRANDE IN COLORADO. IN NEW MEXICO THE MAINSTEM OF THE RIO GRANDE IS FORECAST 25-35% ABOVE NORMAL. RESERVOIR STORAGE IS EXCELLENT IN BOTH COLORADO AND NEW MEXICO.

STREAMFLOW FORECASTS (1000 Ac. Ft.)

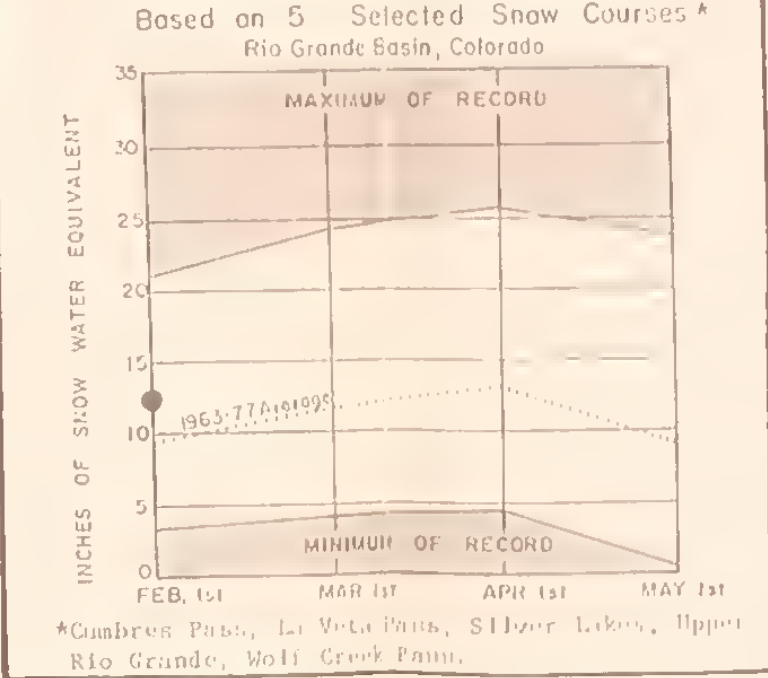
FORECAST POINT	Forecast	% of Average	1963-77 Average
COLORADO (April-September)			
Alamosa Creek above Terrace Reservoir	80	126	63.6
Conejos River near Nogate (1)	210	136	183.0
Culebra Creek at San Luis (2)	17	111	15.3
La Jara Creek near Capulin	8	105	7.6
Los Pinos River near Ortiz	67	109	61.1
Rio Grande at Thirty Mile Bridge (3)	140	118	119.0
Rio Grande near Del Norte (4)	560	121	462.0
Saguache Creek near Saguache	32	106	30.1
San Antonio River at Ortiz	15	115	12.2
South Fork of Rio Grande at South Fork	140	126	119.0
Trinchera Water Supply (April-July) (5)	25	114	21.9
NEW MEXICO (March-July)			
Castaño Creek at Castaño (4)	17	110	15.4
Jemez River near Jemez	40	120	33.3
Pecos River at Pecos	55	116	48.1
Red River at Bonita	30	110	27.3
Rio Chama at El Vado	210	110	177.0
Rio Grande at Oriskany (5)	616	124	497.0
Rio Grande at San Marcial (4)	461	115	405.0
Rio Grande near Valdez	16	109	12.8
Rio Pecos at Fort Huachuca	10	105	9.0
Santa Cruz River at Guadalupe	12	101	11.6

(1) Diverted flow plus change in storage in Pueblo Reservoir. (2) Diverted flow plus change in flow in Clear Creek, Twin Lakes and Reservoir. (3) Change in storage in Trinidad Reservoir. (4) Change in storage in San Marcial Reservoir. (5) Diverted flow plus change in flow in Clear Creek, Twin Lakes and Reservoir.

SUMMARY of SNOW MEASUREMENTS

RIVER BASIN	Number of Courses	1963-77 Average	1963-77 Average
COLORADO			
Alamosa	1	42	87
Conejos	3	66	160
Culebra	4	54	109
Rio Grande, CO	12	55	130

WATERSHED SNOWPACK Based on 5 Selected Snow Courses *

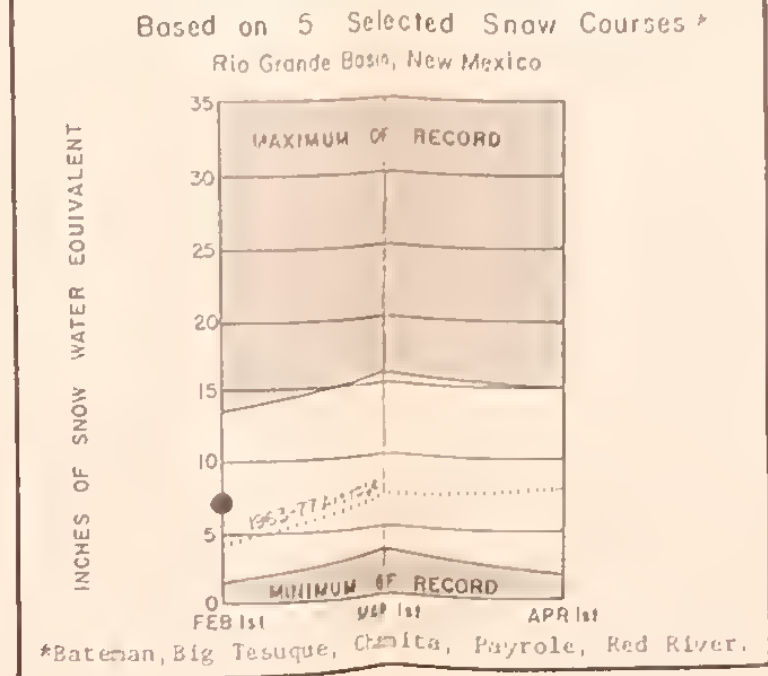


*Cumbres Pass, La Veta Pass, Silver Lakes, Upper Rio Grande, Wolf Creek Pass.

SNOW COURSE MEASUREMENTS

SNOW COURSE	DATE SURVEY	SNOW DEPTH (INCHES)	WATER CONTENT (INCHES)	1963-77 Average
RIO GRANDE BASIN-COLO.				
Alamosa River				
Lily Pond	NS	---	---	---
Silver Lakes	1/29	24	3.4	8.1
Conejos River				
Cumbres Pass	2/04	72	21.3	29.4
Cumbres Trestle	2/04	89	23.8	29.5
La Manga	2/04	63	16.6	25.2
Pinos Mill	NS	---	---	---
Platoro	NS	---	---	---
River Springs	Not Scheduled	---	---	---
Culebra River				
Brown Cabin	1/31	24	6.2	12.4
Culebra	1/28	30	6.0	12.9
La Veta Pass (B)	1/28	26	6.4	10.3
Trinchera (B)	1/29	27	5.9	9.8
Rio Grande				
Big Meadows	1/28	17	3.9	7.3
Cochetopa Pass	1/28	34	7.5	20.9
Crayback	1/31	86	22.6	34.4
Hiway	1/28	28	5.3	14.3
Lake Humphrey	1/30	40	7.9	16.9
Middle Creek	1/30	73	17.1	31.3
Pass Creek	1/31	58	14.3	21.4
Pool Table	1/31	24	4.1	10.4
Porcupine	1/30	30	6.5	16.2
Santa Maria	1/28	21	3.8	10.7
Upper Rio Grande	1/30	41	9.3	14.9
Wolf Creek Pass	1/31	88	24.0	36.1
Wolf Cr. Summit (B)	1/31	95	24.7	38.6

WATERSHED SNOWPACK Based on 5 Selected Snow Courses *



*Bateman, Big Tesuque, Chabita, Payrole, Red River.

SUMMARY of SNOW MEASUREMENTS

RIVER BASIN	Number of Courses	1963-77 Average	1963-77 Average
NEW MEXICO			
Pecos	1	40	126
Red River	2	43	109
Rio Chama	3	78	167
Rio Grande, NM	12	61	122

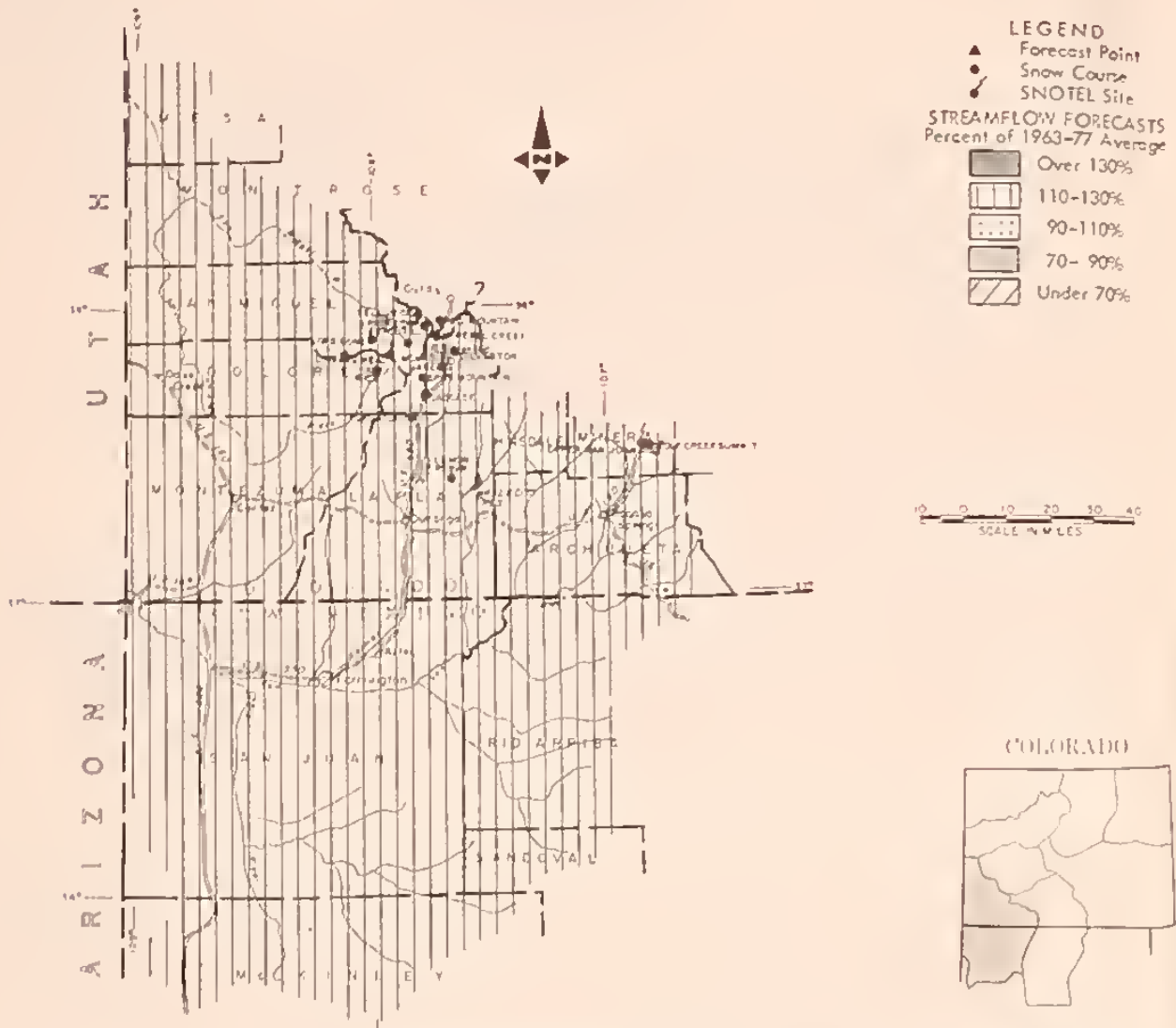
SNOW COURSE MEASUREMENTS

SNOW COURSE	DATE SURVEY	SNOW DEPTH (INCHES)	WATER CONTENT (INCHES)	1963-77 Average
RIO GRANDE BASIN-NM				
Pecos River				
Panhandle	1/31	16	3.4	8.6
Red River				
Bateman Park (B)	1/30	16	2.6	8.0
Red River	1/30	23	4.9	9.6
Rio Chama				
Bateman	2/02	45	11.2	11.6
Chama Divide	1/29	26	5.2	7.0
Chabita	1/29	33	8.7	11.4
Rio Grande				
Alamosa	1/28	20	4.1	7.3
Bateman Trail (B)	NS	---	---	---
Big Tesuque	1/29	14	3.8	8.5
Culebra	NS	---	---	---
Elk Creek	1/29	7	1.6	5.0
Gallegos Peak	1/30	34	7.4	7.5
Hopewell	1/28	46	11.7	18.8
Payrole	1/28	25	6.4	8.2
Palo	1/29	17	3.4	6.4
North Chabita	1/30	34	6.4	7.2
Payrole	1/28	28	6.3	11.4
Quezon				
Rio En Medio	1/29	29	7.1	11.5
San Antonio Sink	1/28	21	4.9	11.7
Sandoval	1/30	26	5.6	8.2
Seneca Divide	1/30	30	8.1	10.7
Town Canyon	1/30	16	3.3	6.8
Tree River	1/28	14	3.8	7.2
Rio Hondo				
Tron Powderhorn	1/25	60	18.4	30.3

(S)-No survey. (B)-On adjacent drainage.



SAN MIGUEL, DOLORES, ANIMAS AND SAN JUAN WATERSHEDS IN COLORADO AND NEW MEXICO



YOUR WATER SUPPLY

SNOW SURVEYS TAKEN FOR THIS REPORT INDICATE SNOWPACKS IN THE ANIMAS, SAN MIGUEL AND DOLORES RIVER WATERSHEDS ARE ABOVE AVERAGE WITH THE SAN JUAN RIVER MUCH ABOVE AVERAGE. ACCUMULATIONS ARE STILL BELOW LAST YEAR'S RECORD BUT WATER SUPPLIES SHOULD BE EXCELLENT. RESERVOIR STORAGE IN THE AREA IS GOOD WITH MOST RESERVOIRS REPORTING NEAR AVERAGE OR ABOVE AVERAGE. SOIL MOISTURE IS GOOD IN THE ANIMAS DRAINAGE AND FAIR IN THE SAN MIGUEL AND DOLORES DRAINAGES.

STREAMFLOW FORECASTS (1000 Ac. Ft.) April - September

FORECAST POINT	Forecast	% of Average	1963-77 Average
Animas River at Durango	530	125	425.0
Dolores River at Dolores	280	120	233.0
La Plata River at Hesperus	30	128	23.5
Los Pinos River at Bayfield (1)	255	125	204.0
Mancos River near Towac (2)	24	110	21.9
Inflow to Navajo River (1 & 3)	810	133	608.0
Piedra Creek at Arboles	260	129	201.0
San Juan River at Carracas	480	130	370.0
San Miguel River at Placerville	140	113	124.0

(1) Observed flow plus change in storage in Tellerito Reservoir. (2) March-July. (3) April-July.

WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" with respect to Usual Supply

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Florida River	Exc	Exc
Hermosa Creek	Exc	Avg
West Dolores River	Exc	Avg
Williams Creek	Exc	Avg

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

Basin or Stream and or RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	1963-77 Average
Groundhog	22	9	9	10
Jackson Gulch	10	1	2	5
Lemon	40	19	8	18
Navajo	1696	1157	1183	729
Vallecito	126	44	37	54

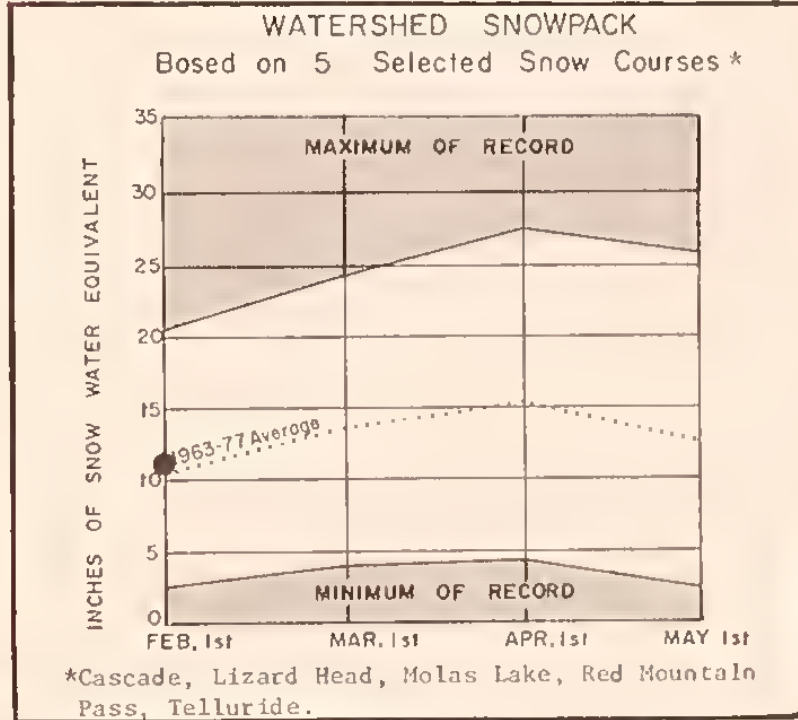
SUMMARY of SNOW MEASUREMENTS

RIVER BASIN and or SUBWATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		LAST YEAR	1961-77 Average
Animas	8	61	120
Dolores	5	69	118
San Juan	5	67	141

SNOW COURSE MEASUREMENTS

SNOW COURSE	CURRENT INFORMATION			PAST RECORD	
	DATE OF SURVEY	SNOW DEPTH (INCHES)	WATER CONTENT (INCHES)	LAST YEAR	AVG. 1937-77
SAN JUAN-DOLORES BASIN					
<u>Animas River</u>					
Cascade	1/28	47	11.6	19.5	8.6
Lemon	2/01	52	12.5	17.4	6.3
Mineral Creek	1/28	45	11.1	18.9	9.9
Molas Lake	1/28	44	9.8	17.9	9.0
Purgatory	1/29	78	18.3	31.8	13.9
Red Mt. Pass (B)	1/28	66	18.3	29.5	18.9
Silverton Sub-Sta.	1/28	28	6.4	12.6	6.2
Spud Mountain	1/28	70	17.9	27.1	15.5
<u>Dolores River</u>					
Groundhog	1/27	34	9.3	15.6	---
Houser Camp	Not Scheduled			---	---
Lizard Head	1/24	50	11.6	18.3	10.8
Lone Cone	1/30	55	13.4	18.6	11.2
Ophir Loop	1/28	41	10.0	17.4	---
Rico	1/24	38	9.4	9.6	5.8
Lizard Head Pass	1/24	50	11.6	17.2	---
Telluride	1/28	24	4.7	9.8	5.3
Trout Lake	1/28	43	10.7	15.1	9.0
<u>San Juan River</u>					
Chama Divide (B)	1/29	24	5.2	7.0	2.8
Chamita (B)	1/29	33	8.7	11.4	5.7
La Plata	1/31	84	24.2	23.0	---
Mancos T-Down	1/28	54	15.3	20.5	---
Upper San Juan	1/30	111	28.0	42.2	19.5
Wolf Cr. Pass (B)	1/31	88	24.0	36.1	17.9
Wolf Cr. Summit	1/31	95	24.7	38.6	18.5

NS-No survey.
(B)-On adjacent drainage.



WATER SUPPLY OUTLOOK BY MAJOR WATERSHED AREAS

-GUNNISON RIVER WATERSHED

Describes water supply conditions in Delta, Gunnison, Cimarron, Shavano, and Uncompahgre Soil Conservation Districts.

-COLORADO RIVER WATERSHED

Describe water supply conditions in DeBeque, Plateau Valley, Mesa, Bookcliff, Eagle County, Middle Park, South Side, and Mt. Sopris Soil Conservation Districts.

-SOUTH PLATTE RIVER WATERSHED

Describes water supply conditions in Fort Collins, Big Thompson, Longmont, Boulder Valley, Jefferson, Teller-Park, Douglas County, Morgan, Kiowa, West Arapahoe, West Adams, East Adams, Platte Valley, Southeast Weld, and West Greeley Soil Conservation Districts. Also describes water supply conditions in Sedgwick, South Platte, Hoxton, Peetz, Padroni, Morgan, Rock Creek, and Yuma Soil Conservation Districts.

-YAMPA, WHITE AND NORTH PLATTE RIVERS WATERSHED

Describes water supply conditions in Yampa, Moffat, West Routt, East Routt, North Park, White River, and Douglas Creek Soil Conservation Districts.

-ARKANSAS RIVER WATERSHED

Describes water supply conditions in Lake County, Upper Arkansas, Fremont, Custer County Divide, Fountain Valley, Black Squirrel, Central Colorado, Turkey Creek, South Pueblo, Olney Boone, Cheyenne, Upper Huerfano, Spanish Peaks, Purgatoire River, Trinchero, Western Baca, Southeastern Baca, Two Buttes, Bent, Timpas, Northeast Prowers, Prowers, Kiowa County, West Otero, East Otero, Prairie, Hi Plains, and Double El Soil Conservation Districts.

-RIO GRANDE WATERSHED

Describes water supply conditions in Rio Grande, Center, Conejos, Mosca Hooper, and Costillo, Soil Conservation Districts. Also describes water supply conditions in Upper Chama, East Rio Arriba, Toas, Lindrith, Jemez, Santa Fe-Pojoaque, Sandoval, Tijeras, Cuba and Edgewood Soil Conservation Districts.

-DOLORES, SAN JUAN, AND ANIMAS RIVERS WATERSHED

Describes water supply conditions in San Miguel Basin, Dove Creek, Dolores, Mancos, LaPlata, Pine River, San Juan, San Miguel Basin, and Glade Park Soil Conservation Districts.

